

## ABSTRACT

A process for producing a polyether polymer composition, comprising incorporating an antioxidant insoluble in an organic solvent and/or a stabilizer soluble in the organic solvent, in a slurry containing a polyether polymer and the organic solvent to disperse or dissolve the antioxidant and/or stabilizer; and then, removing the organic solvent. Also provided a polyether polymer composition comprising a polyether polymer particle, and an antioxidant insoluble in an organic solvent incapable of dissolving the polymer particle, and/or a stabilizer soluble in the organic solvent; and satisfying at least one of the following requirements: (1) most of the antioxidant is deposited on the surface of polymer particle; (2) the polymer has a gel content of not larger than 5% by weight; and (3) most of the stabilizer exists within the polymer particle. The polymer composition produced by the above-mentioned process and the polymer composition satisfying the requirements (1), (2) and (3) give a solid electrolyte film having good mechanical properties.